necessarily provide a discernible contrast to identify it as fill. Specific regions with anomalous strong EM conductivity responses include:

- Northeast Sector, along E. 55th Street –anomalous strong EM conductivity responses, Former bank and gas-service station, (20-ft E – 50-ft W/ 210-360-ft N);
- Northeast Sector, along E. Woodland Avenue, between E. 53rd and E.55th Streets, elevated EM conductivity responses, vicinity of former gas-service station and print shop (0 – 170-ft W/ 300 – 400-ft N);
- Southeast sector, along E. 55th Street, scattered irregular elevated EM conductivity responses, former gas-service station (20-ft E – 150-ft W/ 0 – 110-ft N);
- West-central Sector, between E. 51st and E. 53rd Street, north of gravel driveway, anomalous strong, rectangular-shaped EM conductivity anomaly, vicinity of former print shop and metal scrap yard (285-350-ft W/ 230-280-ft N);
- Northwest Parcel (west of E. 51st Street), Anomalous strong EM conductivity responses on east and west sides of building, including extremely strong EM anomaly (425-450-ft W/ 375-400-ft N), vicinities of former print-shop, paint storage and gas-service station.

The strong EM conductivity responses in these locations are believed to indicate zones of highly conductive fill. Examples of possible high conductivity fill include rubble, general refuse and demolition debris with miscellaneous metallic content, and/or industrial fill such as slag, foundry sand, cinders, fill with disseminated metal particles, and/or materials with elevated salt content. It is believed that the most likely cause of specific zones of elevated to anomalous EM conductivity levels are former excavations (e.g. UST) or former basements. The strength of the EM conductivity responses may be indicative of one or more of the following conditions: (1) the electrical properties of the fill, (2) depth of fill and/or the (3) presence of elevated water, metal or salt content. Further invasive exploration in these zones may be desired to document that actual subsurface fill conditions. The extremely strong EM conductivity response observed in the east sector of the northwest parcel (425-450-ft W/ 375-400-ft N) is believed to be caused by a reinforced concrete structure such as a more deeply buried concrete slab, ramp, basement floor or subgrade vault. The strong EM conductivity levels observed over E. 53rd Street may be caused in part by the pavers, conductive subgrade fill, and/or the presence of various buried utility piping below E. 53rd Street.

Localized, anomalous strong EM in-phase responses (metal or strongly conductive material) are apparent throughout the site, although most of these anomalies are not as extensive compared to the strong EM conductivity response regions. Possible explanations for the large EM in-phase anomalies include underground storage tanks and reinforced subgrade structures, while the smaller, more isolated in-phase anomalies could represent small tanks, barrels, equipment, clusters of pipes, pieces of metal, demolition debris and/or reinforced concrete fragments. Significant anomalous strong EM in-phase response locations include (Figure 2):

- Southeast Sector (80-90-ft W/ 90-120-ft N) – Anomalous strong In-phase anomaly, possible UST, vicinity of former gas-service station.
- East/Northeast Sector, along W. 55th Street (20-ft E – 40-ft W/ 240-315-ft N), possible scattered metallic debris;
- Southeast Sector (5-ft E/12-ft N) – Possible small tank or metal debris;
- Central Area, East side of W. 53rd Street (160-ft W/ 285-ft N), Possible small tank, metal barrel or debris;
- Southwest Sector (410-ft W/ 55-ft N), possible metal debris;
- West-central Sector
    - 265-ft W/ 240-ft N*
    - 295-ft W/ 300-ft N*
    - 250-ft W/ 305-ft N
    - 275-ft W/ 345-ft N
    - 315-ft W/355-ft N*
    - 342-ft W/ 355-ft N
    - 355-ft W/ 285-ft N
    - Misc. smaller, weaker in-phase responses in vicinity of above anomalies.

  The above listed anomaly locations could represent targets such as small tanks, barrels, equipment, metal debris, reinforced concrete fragments, etc. The starred (*) anomalies are considered the most significant and most likely to correspond to small tanks or similar sized metal structures/debris.

- Northwest Parcels, west of E 51st Street
    - 425-450-ft W/ 375-400-ft N – Possible reinforced concrete structure (e.g., pad, ramp, basement floor, subgrade vault)
    - 445-475-ft W/ 350-370-ft N – Possible tank, large pipe, reinforced concrete vault or other metallic structure – note manhole cover over anomaly location.

Further invasive exploration, such as soil coring or test pit excavations, would be required to document the actual cause of the anomalous EM in-phase responses at these locations. The in-phase anomaly that appears most likely to correspond to a UST is located in the southeast sector of the site (Figure 2: 80-90-ft W/ 90-120-ft N), in the vicinity of a former Shell gas-service station.

The Ground-penetrating Radar (GPR) records show broad regions of deeper, more chaotic GPR reflections throughout the site. The most prominent and laterally extensive chaotic GPR responses occur in the northern half of the site and along the E. 55th Street frontage. In general, it is believed that the chaotic GPR reflections indicate regions of fill spread across the site. Regions with shallow to moderate depth chaotic GPR reflections are believed to indicate a veneer of rubble demolition debris fill that may include bricks, concrete fragments, mortar and

other building materials. Specific zones with deeper, highly chaotic GPR reflections may indicate former UST excavations or backfill basements. The types of materials within the excavations may include demolition debris, sand and gravel, and locally available industrial fill, such as slag, cinders and foundry sand. Figures 3a and 4a illustrate specific zones of the deeper, chaotic reflection response, while Figures 3b, 3c, 4b and 4c show the typical shallow to moderate depth chaotic GPR reflection response that was observed over much of the northern half of the site.

GPR scans over specific EM anomaly locations (e.g. Figure 3c) do not appear to show response similar to the anticipated response over tanks; However, it is not uncommon for GPR to show inconclusive results over more deeply buried targets covered by highly conductive industrial or demolition debris fill. A strong reflective surface was observed in the east-central sector of the site, close to the E. 55th Street sidewalk (Figure 3b). This reflective interface may represent a former floor slab or base of a former excavation.

The overall GPR response observed over the accessible areas that could be scanned using GPR ranged from low to strong signal attenuation effects. The strong signal attenuation in some areas is believed to be caused by higher conductivity subsurface materials such as wet clay, silt and/or other high conductivity industrial fill. The depth of exploration probably did not exceed 3-ft to 4-ft in areas with these types of soil and fill materials; The exploration depth could be less in areas where higher amounts of wet clay, slag, foundry sand, elevated salt or other complicating near-surface conditions or obstructions are present. It is not uncommon for GPR signal penetration to be poor over targets buried below several feet of highly conductive backfill such as wet silty clay or slag. GPR signal penetration is known to be poor within the clay and weathered shale bedrock that can be encountered in this region of Ohio. Lower signal attenuation/greater depth penetration areas may indicate the presence of lower conductivity demolition debris fill or sand and gravel.

Limitations

The use of geophysical exploration methods, such as those described herein, should not be considered a substitute for invasive subsurface exploration such as drilling, digging or excavation. The EM and GPR data are interpreted. No warranty or statement of fact regarding actual subsurface conditions is contained herein. If questions or uncertainties exist regarding the interpreted presence or absence of subsurface conditions based on the geophysical data obtained from this site, it is recommended that supplemental subsurface explorations, such as drilling or test-pit explorations, be conducted if possible to further characterize and document actual subsurface conditions.

Grumman Exploration, Inc. has appreciated this opportunity to be of service again to Mannik & Smith Group, Inc. If you have any questions or comments regarding the information contained in this report, please feel free to contact us.

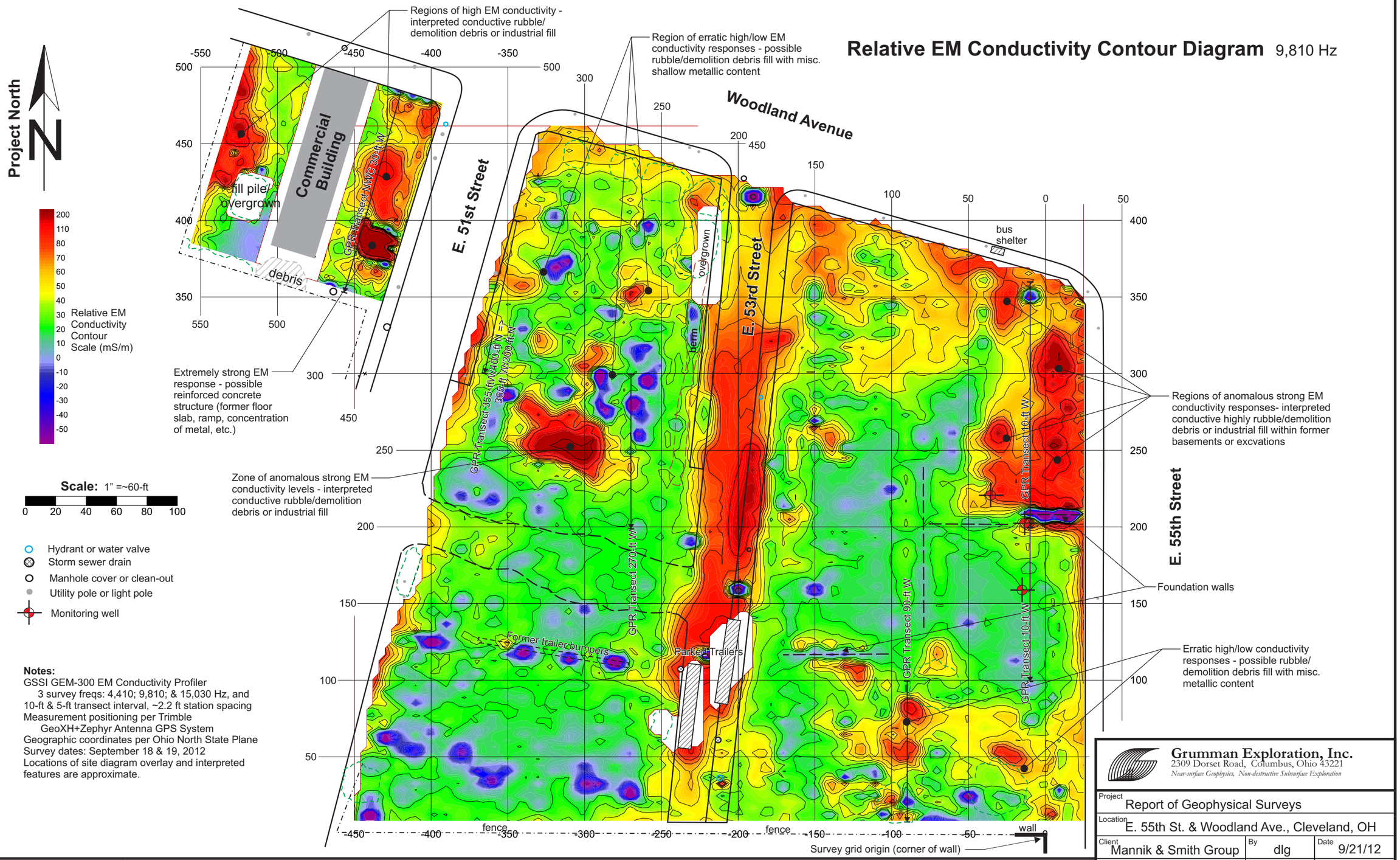
Sincerely,

Grumman Exploration, Inc.

David L. Grumman, Jr.
President/Geophysicist

Attachments
Figures 1- 4
Overview and Limitations of EM Conductivity Profiling

Relative EM Conductivity Contour Diagram 9,810 Hz



Notes:
GSSI GEM-300 EM Conductivity Profiler
3 survey freqs: 4,410; 9,810; & 15,030 Hz, and 10-ft & 5-ft transect interval, ~2.2 ft station spacing
Measurement positioning per Trimble GeoXH+Zephyr Antenna GPS System
Geographic coordinates per Ohio North State Plane
Survey dates: September 18 & 19, 2012
Locations of site diagram overlay and interpreted features are approximate.

Grumman Exploration, Inc.
2309 Dorset Road, Columbus, Ohio 43221
Near-surface Geophysics, Non-destructive Subsurface Exploration

Project: Report of Geophysical Surveys			
Location: E. 55th St. & Woodland Ave., Cleveland, OH			
Client: Mannik & Smith Group	By: dlg	Date: 9/21/12	
Project No.: 01-32083	Checked	Scale: 1”=60-ft	

Figure	Title
1	Relative EM Conductivity Contour Diagram

EM In-Phase Response (metal-sensitive) Contour Diagram 9,810 Hz

Project North

EM In-Phase (metal-sensitive) Response Color Contour Scale (ppm)

8000
7000
6000
5000
4000
3000
2000
1000
0
-1000
-2000
-3000
-4000
-5000
-6000
-7000
-8000

Scale: 1" =~60-ft

0 20 40 60 80 100

Hydrant or water valve
Storm sewer drain
Manhole cover or clean-out
Utility pole or light pole
Monitoring well

Isolated anomalous strong EM in-phase responses - possible metal objects or small structures within region of rubble/debris fill

Shallow metal object/debris

Extremely strong EM responses - possible reinforced concrete structures (former floor slab, ramp, concentration of metal, etc.)

Region of elevated EM in-phase levels - interpreted conductive rubble/demolition debris and/or industrial fill with scattered metallic content

Region of elevated, erratic EM in-phase response levels - interpreted conductive rubble/demolition debris or industrial fill with scattered metallic content

Anomalous strong EM in-phase response- possible UST or other large buried metal structure within region of rubble/demolition debris fill

Survey grid origin (corner of wall)

Woodland Avenue
E. 51st Street
E. 53rd Street
E. 55th Street
Commercial Building
fill pile/ overgrown
debris
overgrown
berm
bus shelter
Former trailer bumpers
Parked Trailers
fence
fence
wall

GPR Transect NWC 30-ft W
GPR Transect 345-ft W/400-ft N => 365-ft W/300-ft N
GPR Transect 270-ft W
GPR Transect 90-ft W
GPR Transect 10-ft W
GPR Transect 10-ft W

Notes:
GSSI GEM-300 EM Conductivity Profiler
3 survey freqs: 4,410; 9,810; & 15,030 Hz, and 10-ft & 5-ft transect interval, ~2.2 ft station spacing
Measurement positioning per Trimble GeoXH+Zephyr Antenna GPS System
Geographic coordinates per Ohio North State Plane
Survey dates: September 18 & 19, 2012
Locations of site diagram overlay and interpreted features are approximate.

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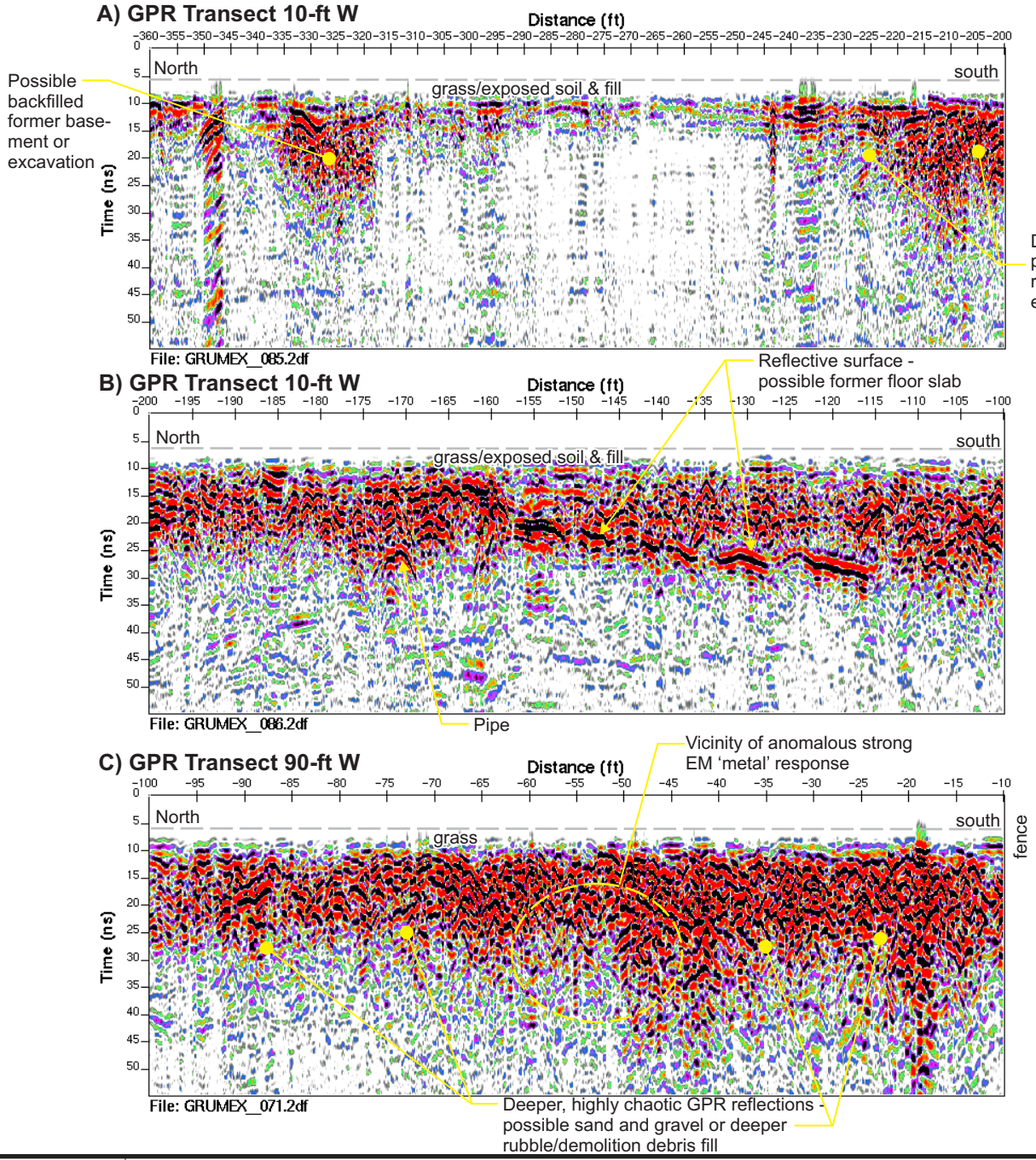
Location: E. 55th St. & Woodland Ave., Cleveland, OH			
Client: Mannik & Smith Group	By: dlg	Date: 9/21/12	
Project No.: 01-32083	Checked:	Scale: 1"=60-ft	

Figure	Title
2	EM In-Phase Response (metal-sensitive) Contour Diagram



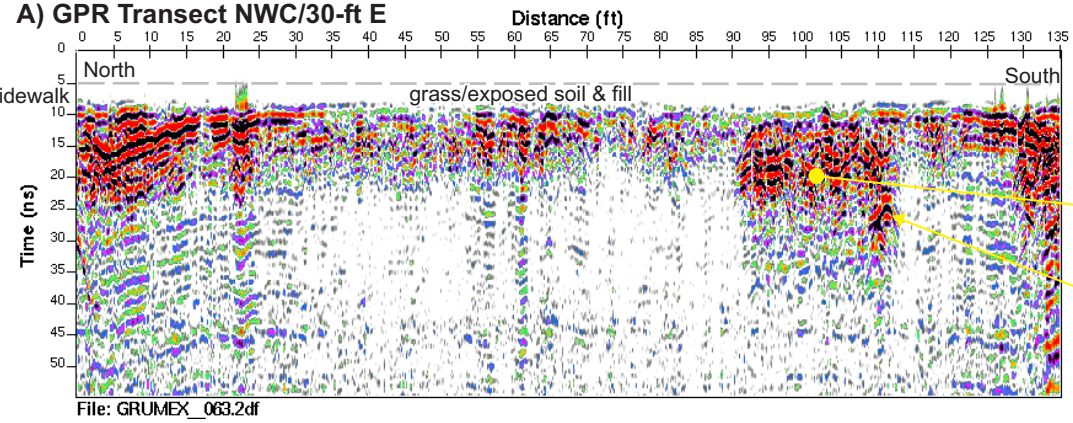
Notes:
GSSI SIR-3000 & 400 MHz antenna GPR system
512 samples/trace; ~10 traces/ft
Survey date: September 19, 2012
Refer to Figure 1 for GPR Transect locations

Grumman Exploration, Inc.
2309 Dorset Road, Columbus, Ohio 43221
Near-surface Geophysics, Non-destructive Subsurface Exploration

Project	Report of Geophysical Surveys		
Location	E. 55th St. & Woodland Ave., Cleveland, OH		
Client/Owner: Mannik & Smith Group		By: dlg	Date: 10/31/12
Project No.: 01-32083		Checked	Scale: as shown

Figure	Title
3	Selected GPR Records - East and Southeast Parcels

A) GPR Transect NWC/30-ft E

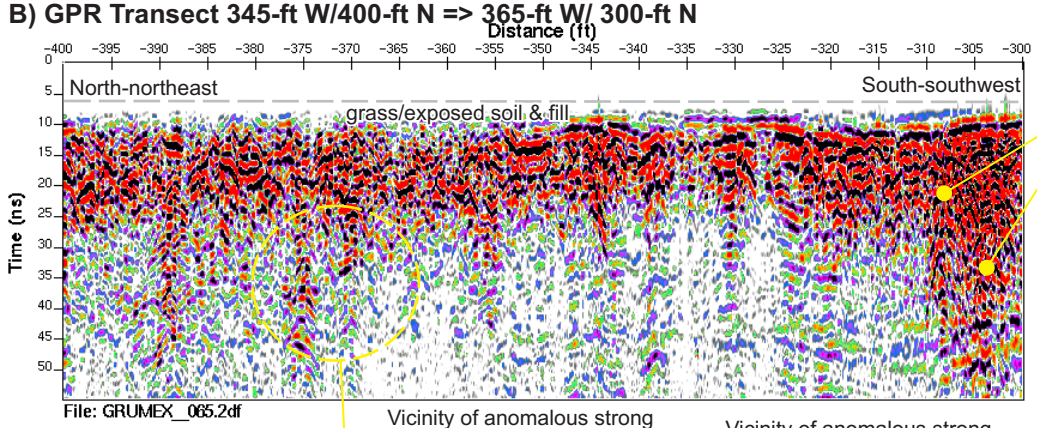


Possible buried structure - coincides with strong EM 'metal response

Possible reinforced concrete slab, ramp or reinforced vault - coincides with anomalous strong EM 'metal' response

Pipe

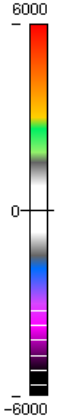
B) GPR Transect 345-ft W/400-ft N => 365-ft W/ 300-ft N



Deeper, highly chaotic GPR reflections - possible sand and gravel or deeper rubble/demolition debris fill in former excavation or basement

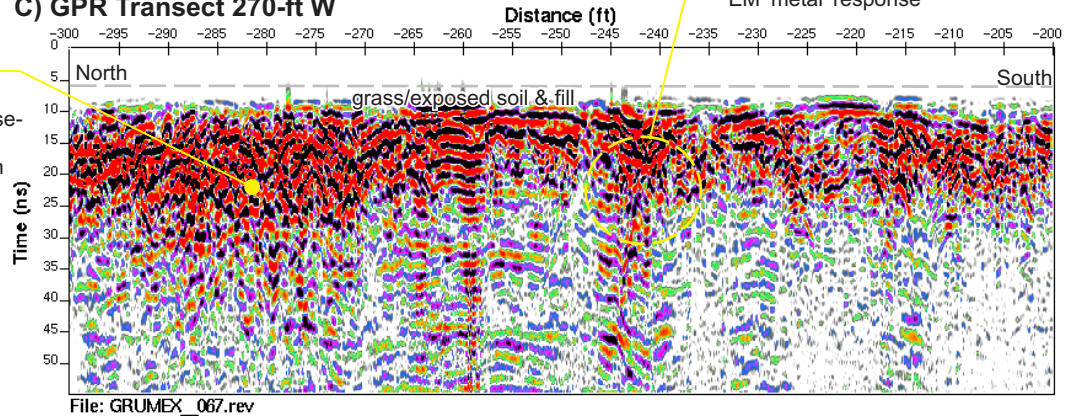
Vicinity of anomalous strong EM 'metal' response

Vicinity of anomalous strong EM 'metal' response



GPR signal amplitude color scale

C) GPR Transect 270-ft W



Possible backfilled former basement or excavation

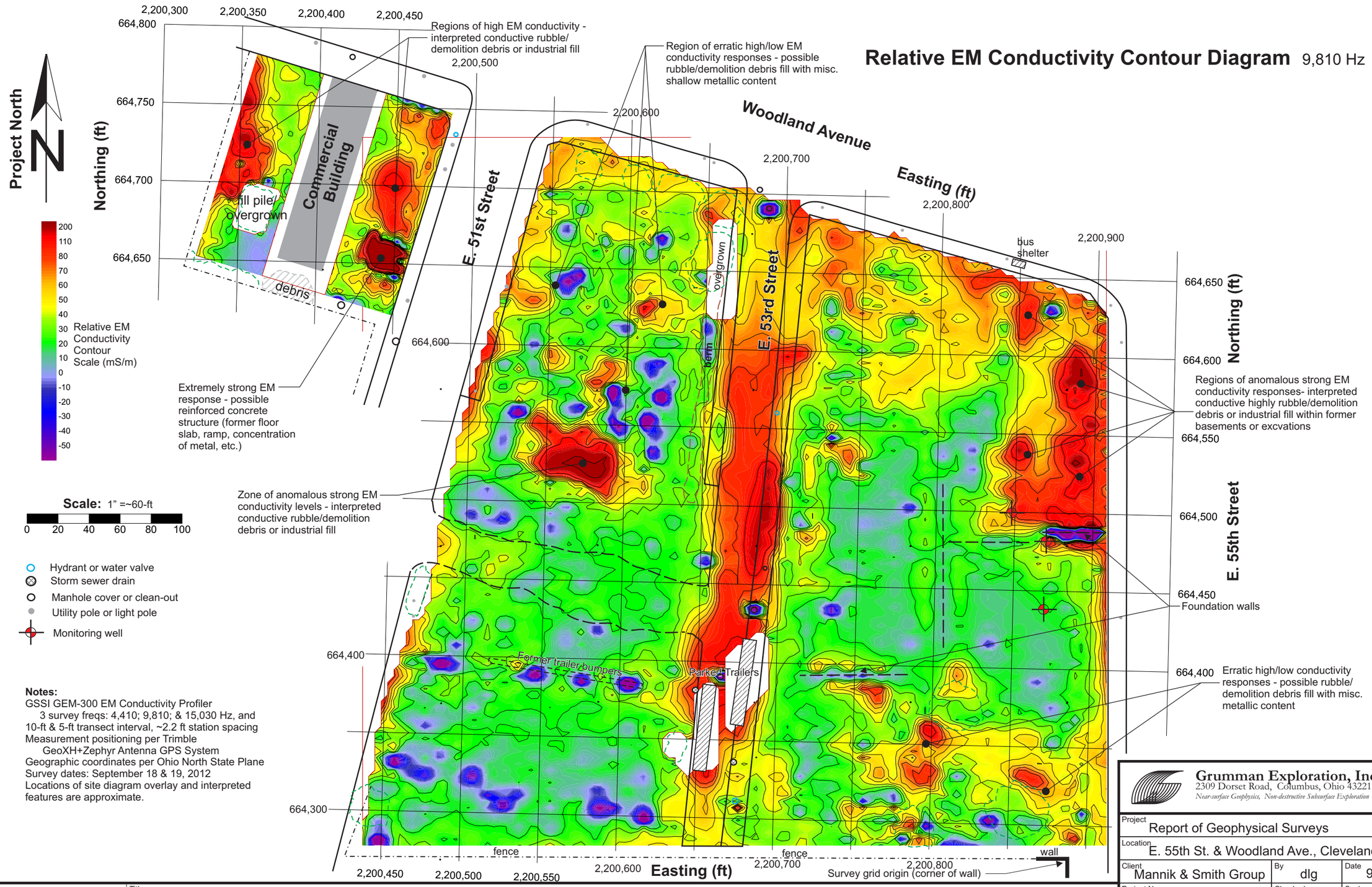
Notes:
GSSI SIR-3000 & 400 MHz antenna GPR system
512 samples/trace; ~10 traces/ft
Survey date: September 19, 2012
Refer to Figure 1 for GPR Transect locations

Grumman Exploration, Inc.
2309 Dorset Road, Columbus, Ohio 43221
Near-surface Geophysics, Non-destructive Subsurface Exploration

Project: Report of Geophysical Surveys			
Location: E. 55th St. & Woodland Ave., Cleveland, OH			
Client/Owner: Mannik & Smith Group	By: dlg	Date: 10/31/12	
Project No.: 01-32083	Checked:	Scale: as shown	

Figure	Title
4	Selected GPR Records - Central and Northwest Parcels

Relative EM Conductivity Contour Diagram 9,810 Hz



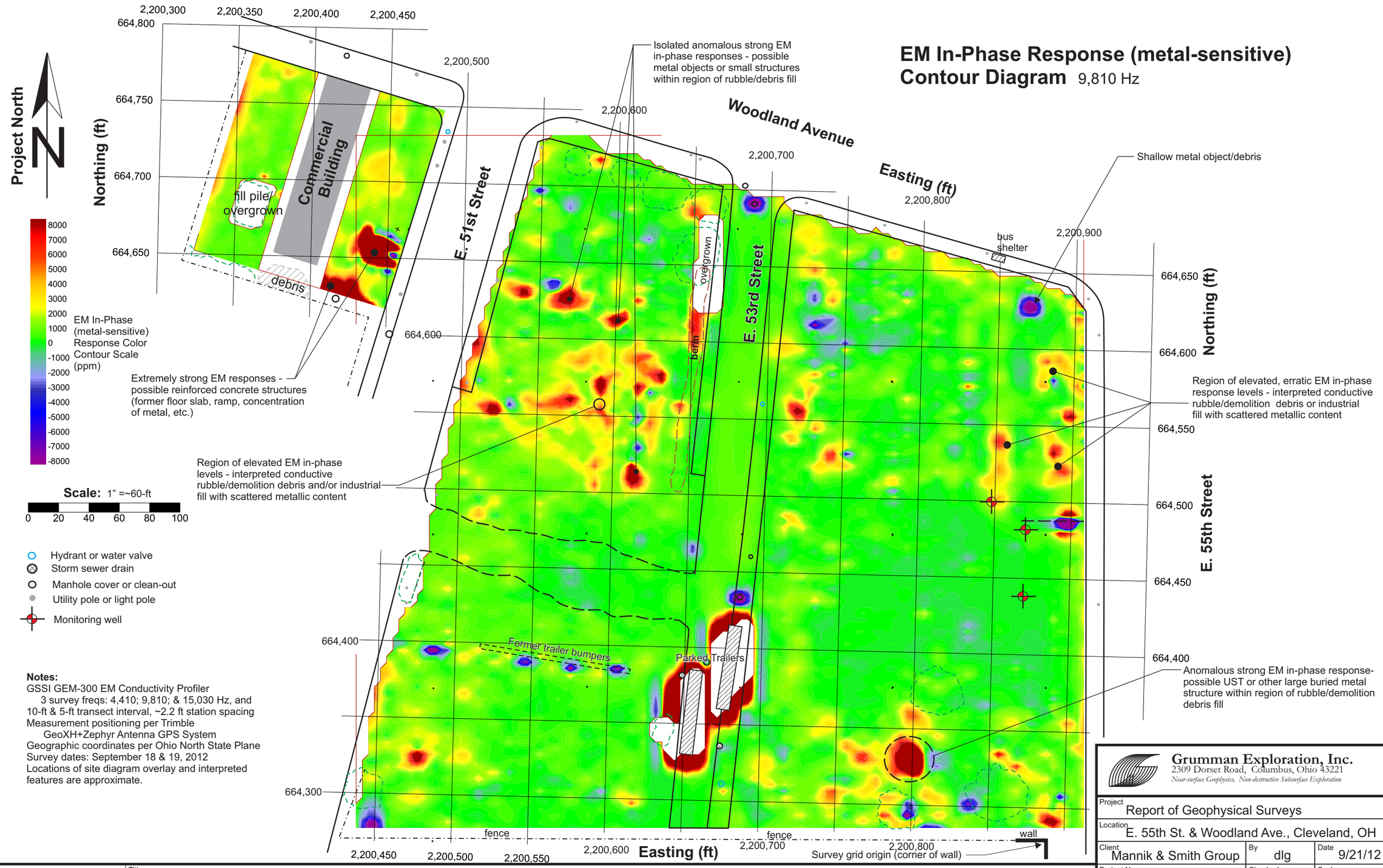
Notes:
GSSI GEM-300 EM Conductivity Profiler
3 survey freqs: 4,410; 9,810; & 15,030 Hz, and 10-ft & 5-ft transect interval, ~2.2 ft station spacing
Measurement positioning per Trimble GeoXH+Zephyr Antenna GPS System
Geographic coordinates per Ohio North State Plane
Survey dates: September 18 & 19, 2012
Locations of site diagram overlay and interpreted features are approximate.

Grumman Exploration, Inc.
2309 Dorset Road, Columbus, Ohio 43221
Near-surface Geophysics, Non-destructive Subsurface Exploration

Project	Report of Geophysical Surveys		
Location	E. 55th St. & Woodland Ave., Cleveland, OH		
Client: Mannik & Smith Group		By: dlg	Date: 9/21/12
Project No.: 01-32083	Checked:	Scale: 1"=60-ft	

Figure	Title
A-1	Relative EM Conductivity Contour Diagram (State Plane Coordinates Grid Overlay)

EM In-Phase Response (metal-sensitive) Contour Diagram 9,810 Hz



Notes:
GSSI GEM-300 EM Conductivity Profiler
3 survey freqs: 4,410; 9,810; & 15,030 Hz, and 10-ft & 5-ft transect interval, ~2.2 ft station spacing
Measurement positioning per Trimble GeoXH+Zephyr Antenna GPS System
Geographic coordinates per Ohio North State Plane
Survey dates: September 18 & 19, 2012
Locations of site diagram overlay and interpreted features are approximate.

Grumman Exploration, Inc.
2309 Dorset Road, Columbus, Ohio 43221
Near-surface Geophysics, Non-destructive Subsurface Exploration

Project	Report of Geophysical Surveys
Location	E. 55th St. & Woodland Ave., Cleveland, OH
Client	Mannik & Smith Group
By	dlg
Date	9/21/12
Project No.	01-32083
Checked	
Scale	1"=60-ft

Figure	A-2
Title	EM In-Phase Response (metal-sensitive) Contour Diagram (State Plane Coordinates Grid Overlay)

APPENDIX C:
MONITORING WELL DIAGRAMS

The Mannik & Smith Group, Inc.

Soil Boring / Monitoring Well Number: MW-01

Project Number: C3210002
Project Name: Maingate, Phase II ESA
Site Location: Cleveland, Ohio
Client: Cuyahoga County
MSG Personnel: AWS

Contractor: Frontz Drilling
Driller: Joe
Drilling Method: Continuous
Drill Rig: Geoprobe 6620 DT
Total Depth: 26 feet

MW Installation Date: 11/19/2012
Northing: NA
Easting: NA
Ground Surface Elev.: 498.48

Depth (ft)	Elev. (ft.)	Well Diagram (Casing Type: 1-inch PVC)	Elev. (ft.)	Graphic Log	Description of Cuttings	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks
	497.48	Flush Mounted Well in Concrete			Sand and gravel **FILL**, brick fragments	1	DT			
						2	DT			
5		Bentonite Chips				3	DT			
						4	DT			
	489.48					5	DT			
10			488.48		Brown **SILTY SAND**, damp	6	DT			
						7	DT			
		Sand Filter	484.48		Gray **SILTY CLAY**, moist	8	DT			
15			482.48		Brown fine **SAND**, wet	9	DT			
		0.01 Slotted Prepack Screen				10	DT			
20						11	DT			
	477.23	MW Depth = 21.25'				12	DT			
						13	DT			
25			472.48		End of Soil Boring = 26 feet					
30										

The Mannik & Smith Group, Inc.

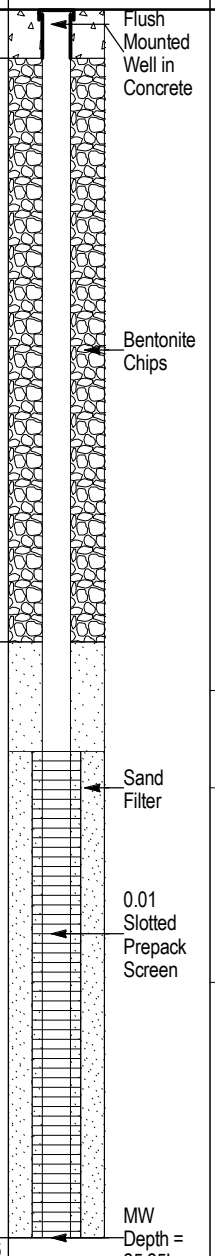
Page 1 of 1

Soil Boring / Monitoring Well Number: MW-02

Project Number: C3210002
Project Name: Maingate, Phase II ESA
Site Location: Cleveland, Ohio
Client: Cuyahoga County
MSG Personnel: AWS

Contractor: Frontz Drilling
Driller: Joe
Drilling Method: Continuous
Drill Rig: Geoprobe 6620 DT
Total Depth: 26 feet

MW Installation Date: 11/19/2012
Northing: NA
Easting: NA
Ground Surface Elev.: 498.51



Depth (ft)	Elev. (ft.)	Graphic Log	Description of Cuttings	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks
	497.51		Brown sand **FILL**, concrete fragments	1	DT			
				2	DT			
5				3	DT			
				4	DT			
				5	DT			
10				6	DT			
	485.51			7	DT			
	484.51		Brown fine **SAND**, fill, damp	8	DT			
15	482.51		Gray fine**SAND**, little clay, wet	9	DT			
				10	DT			
20	478.51		Brown fine **SAND and GRAVEL**, wet	11	DT			
				12	DT			
25				13	DT			
	473.26							
	472.51		End of Soil Boring = 26 feet					
30								

The Mannik & Smith Group, Inc.

Soil Boring / Monitoring Well Number: MW-03

Project Number: C3210002
Project Name: Maingate, Phase II ESA
Site Location: Cleveland, Ohio
Client: Cuyahoga County
MSG Personnel: AWS

Contractor: Frontz Drilling
Driller: Joe
Drilling Method: Continuous
Drill Rig: Geoprobe 6620 DT
Total Depth: 26 feet

MW Installation Date: 11/19/2012
Northing: NA
Easting: NA
Ground Surface Elev.: 499.96

Depth (ft)	Elev. (ft.)	Well Diagram (Casing Type: 1-inch PVC)	Elev. (ft.)	Graphic Log	Description of Cuttings	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks
	498.96	Flush Mounted Well in Concrete			Sand and gravel **FILL**, brick fragments	1	DT			
						2	DT			
5						3	DT			
		Bentonite Chips				4	DT			
			491.96		Brown **SANDY CLAY**, damp	5	DT			
10			489.96		Brown **CLAY**, little sand and silt, wet	6	DT			
						7	DT			
	486.96		485.96		Gray **CLAY**, little silt, damp	8	DT			
15		Sand Filter				9	DT			
			481.96		Brown **SAND and GRAVEL**, wet	10	DT			
20		0.01 Slotted Prepack Screen				11	DT			
						12	DT			
25		MW Depth = 25.08'				13	DT			
	474.88		473.96		End of Soil Boring = 26 feet					
30										

The Mannik & Smith Group, Inc.

Soil Boring / Monitoring Well Number: MW-04

Project Number: C3210002
Project Name: Maingate, Phase II ESA
Site Location: Cleveland, Ohio
Client: Cuyahoga County
MSG Personnel: AWS

Contractor: Frontz Drilling
Driller: Joe
Drilling Method: Continuous
Drill Rig: Geoprobe 6620 DT
Total Depth: 26 feet

MW Installation Date: 11/20/2012
Northing: NA
Easting: NA
Ground Surface Elev.: 498.58

Depth (ft)	Elev. (ft.)	Well Diagram (Casing Type: 1-inch PVC)	Elev. (ft.)	Graphic Log	Description of Cuttings	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks
	497.58	Flush Mounted Well in Concrete			Sand and gravel **FILL**, brick fragments	1	DT			
						2	DT			
5			493.58			3	DT			
		Bentonite Chips			Brown coarse **SAND** with gravel	4	DT			
						5	DT			
10						6	DT			
	487.58		486.58							
			483.58		Brown **CLAY** with silt	7	DT			
15		Sand Filter			Brown coarse **SAND** with gravel, damp	8	DT			
			480.58			9	DT			
		0.01 Slotted Prepack Screen	478.58		Brown **CLAY**, trace silt, wet	10	DT			
20			476.58		Brown coarse **SAND**, trace silt and gravel, wet	11	DT			
		MW Depth = 23.30'			Brown fine **SAND**, trace gravel, wet	12	DT			
	475.28		473.58							
25						13	DT			
					End of Soil Boring = 26 feet					
30										

The Mannik & Smith Group, Inc.

Soil Boring / Monitoring Well Number: MW-05

Project Number: C3210002
Project Name: Maingate, Phase II ESA
Site Location: Cleveland, Ohio
Client: Cuyahoga County
MSG Personnel: AWS

Contractor: Frontz Drilling
Driller: Joe
Drilling Method: Continuous
Drill Rig: Geoprobe 6620 DT
Total Depth: 26 feet

MW Installation Date: 11/20/2012
Northing: NA
Easting: NA
Ground Surface Elev.: 497.36

Depth (ft)	Elev. (ft.)	Well Diagram (Casing Type: 1-inch PVC)	Elev. (ft.)	Graphic Log	Description of Cuttings	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks
	496.36	Flush Mounted Well in Concrete			Sand and gravel **FILL**, brick fragments	1	DT			
						2	DT			
5						3	DT			
			491.36		Brown coarse **SAND and GRAVEL**, damp	4	DT			
		Bentonite Chips				5	DT			
10						6	DT			
						7	DT			
	484.36									
15			482.36		Brown fine **SAND** little silt, trace gravel, wet	8	DT			
		Sand Filter				9	DT			
		0.01 Slotted Prepack Screen				10	DT			
20						11	DT			
						12	DT			
		MW Depth = 24.67'								
25	472.69		472.36			13	DT			
					End of Soil Boring = 26 feet					
30										

The Mannik & Smith Group, Inc.

Soil Boring / Monitoring Well Number: MW-06

Project Number: C3210002
Project Name: Maingate, Phase II ESA
Site Location: Cleveland, Ohio
Client: Cuyahoga County
MSG Personnel: AWS

Contractor: Frontz Drilling
Driller: Joe
Drilling Method: Continuous
Drill Rig: Geoprobe 6620 DT
Total Depth: 26 feet

MW Installation Date: 11/20/2012
Northing: NA
Easting: NA
Ground Surface Elev.: 500.09

Depth (ft)	Elev. (ft.)	Well Diagram (Casing Type: 1-inch PVC)	Elev. (ft.)	Graphic Log	Description of Cuttings	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks
	499.09	Flush Mounted Well in Concrete			Sand and gravel **FILL**, brick and wood fragments	1	DT			
						2	DT			
5						3	DT			
		Bentonite Chips				4	DT			
						5	DT			
10			490.09		Brown **SILT** with clay, few sand seams	6	DT			
	487.09					7	DT			
15			485.09			8	DT			
		Sand Filter			Brown coarse **SAND** with gravel, damp	9	DT			
			482.09							
		0.01 Slotted Prepack Screen			Brown fine **SAND** trace gravel and silt, wet	10	DT			
20						11	DT			
						12	DT			
						13	DT			
25	475.01	MW Depth = 25.08'	475.09		End of Soil Boring = 26 feet					
30										

APPENDIX D: WELL DEVELOPMENT FORMS

The Mannik & Smith Group

Well Sampling Data Log

Well ID MW-01

Project Information

Project #: C32100002 Date: 11/28/12
Site Name: MAINGATE Telephone #:
MSG Personnel Present: AWS
Regulatory Observer(s): —
Weather Conditions: OVERCAST Temperature °F: 35°

Field Instrumentation

Static Water Level Measurement: Heron H.01L
Immiscible Layer(s) Measurement: Heron H.01L
Measurement of Field Parameters: Various
Peristaltic Pump: Masterflex E/S

Monitoring Well Data

Ground Surface Elev.:
Top of Casing Elev.:
Ground Water Elev.:
Hydraulic Location:

Additional Monitoring Well Data

Well Condition/Evidence of Tampering: None Well Diameter: 1"
Monitoring Purpose: PHASE II
Total Depth (from TOC): 21.25 (ft.) - Static Water Level: 15.49 (ft.)
= Height of Water Column: (ft.)
Immiscible Layer(s) Present: No / Yes
Top of Layer: (ft.)
Bottom of Layer: (ft.)
Thickness: (ft.)
Immiscible Layer(s) Sampled: Yes / Not Applicable

Monitor Well Diameter	Volume/foot of Water	Height of Water Column	Volume of Water Column		Minimum Vol. to Purge (gal)
1 (in)	0.041 (gal) x	(ft)	=	x 3	=
2 (in)	0.163 (gal) x	(ft)	=	x 3	=
4 (in)	0.653 (gal) x	(ft)	=	x 3	=

Monitoring Well Purging and Sampling Data

Purging Device: PERISTALTIC
Purging Start Time: 901
Purging Stop Time:
Gallons Purged:
Well Yield: High / Moderate / Low
Sampling Device:
Time of Sampling:
Second Attempt:
Third Attempt:
Fourth Attempt:
Fifth Attempt:

Well Volumes	Time	Vol. Purged (gal)	Temperature (°C)	pH (S.U.)	Conductivity ~~(µS/cm)~~ mS/cm	Turbidity NTU	Dissolved O_2 (mg/L)
Initial	901	—	13.56	6.82	2.49	297	0.00
1	906	0.75	13.69	6.94	2.36	45.3	0.00
2	911	1.25	13.69	6.95	2.35	21.6	0.00
3	916	1.5	13.86	6.96	2.32	16.5	0.00
4	921	1.75	13.94	6.96	2.30	13.8	0.00
5		SAMPLED					
6							
7							
Final							

Sample Container Information

Sample ID	Parameter	Container	Container Size	No. of Containers	Preservative
MW-01	VOCs	40mL VOA	40mL	3	HCl

Comments

WELL YIELD VERY HIGH STABILIZED AFTER 1 WELL Volume (14.49')

Samples Shipped to: GEO ANALYTICAL Via:
Form Completed By: AWS

The Mannik & Smith Group

Well Sampling Data Log

Well ID: MW-02

Project Information

Project #: C3210002 Date: 11/28/12
Site Name: MAINGATE Telephone #: —
MSG Personnel Present: AWS
Regulatory Observer(s): —
Weather Conditions: Sunny Temperature °F: 35°

Field Instrumentation

Static Water Level Measurement: Heron H.01L
Immiscible Layer(s) Measurement: Heron H.01L
Measurement of Field Parameters: Various
Peristaltic Pump: Masterflex E/S

Monitoring Well Data

Ground Surface Elev.:
Top of Casing Elev.:
Ground Water Elev.:
Hydraulic Location:

Additional Monitoring Well Data

Well Condition/Evidence of Tampering: None Well Diameter: 1"
Monitoring Purpose: PHASE II
Total Depth (from TOC): 25.25 (ft.) - Static Water Level: 15.23 (ft.)
= Height of Water Column: (ft.)
Immiscible Layer(s) Present: No / Yes
Top of Layer: (ft.)
Bottom of Layer: (ft.)
Thickness: (ft.)
Immiscible Layer(s) Sampled: Yes / Not Applicable

Monitor Well Diameter	Volume/foot of Water	Height of Water Column	Volume of Water Column		Minimum Vol. to Purge (gal)
1 (in)	0.041 (gal) x	(ft)	=	x 3	=
2 (in)	0.163 (gal) x	(ft)	=	x 3	=
4 (in)	0.653 (gal) x	(ft)	=	x 3	=

Monitoring Well Purging and Sampling Data

Purging Device: PERISTALTIC
Purging Start Time:
Purging Stop Time:
Gallons Purged:
Well Yield: High / Moderate / Low
Sampling Device:
Time of Sampling:
Second Attempt:
Third Attempt:
Fourth Attempt:
Fifth Attempt:

Well Volumes	Time	Vol. Purged (gal)	Temperature (°C)	pH (S.U.)	Conductivity (mS/cm)	Turbidity NTU	Dissolved O_2 (mg/L)
Initial	955	—	11.27	7.13	2.83	212	0.00
1	1000	0.5	12.94	7.23	3.61	19.7	0.00
2	1005	0.75	12.71	7.28	3.36	21.0	0.00
3	1010	1.0	12.76	7.30	3.30	18.9	0.00
4	1015	1.25	12.77	7.30	3.29	29.8	0.00
5	~~1020~~	SAMPLED					
6							
7							
Final							

Sample Container Information

Sample ID	Parameter	Container	Container Size	No. of Containers	Preservative
MW-02	VOCs	VOA	40 mL	3	HCL

Comments

Samples Shipped to: Via:
Form Completed By:

Mannik & Smith Group — Well Sampling Data Log

Well ID: MW-03

Project Information

Project #: C3210002 Date: 11/28/12
Site Name: MAGNATE Telephone #:
MSG Personnel Present: AWS
Regulatory Observer(s): -
Weather Conditions: Sunny Temperature °F: 35°

Field Instrumentation

Static Water Level Measurement: Heron H.01L
Immiscible Layer(s) Measurement: Heron H.01L
Measurement of Field Parameters: Various
Peristaltic Pump: Masterflex E/S

Monitoring Well Data

Ground Surface Elev.:
Top of Casing Elev.:
Ground Water Elev.:
Hydraulic Location:

Additional Monitoring Well Data

Well Condition/Evidence of Tampering: None Well Diameter: 1"
Monitoring Purpose: Phase II
Total Depth (from TOC): 25.08 (ft.) - Static Water Level: 17.05 (ft.)
= Height of Water Column: (ft.)
Immiscible Layer(s) Present: No / Yes
Top of Layer: (ft.)
Bottom of Layer: (ft.)
Thickness: (ft.)
Immiscible Layer(s) Sampled: Yes / Not Applicable

Monitor Well Diameter	Volume/foot of Water	Height of Water Column	Volume of Water Column		Minimum Vol. to Purge (gal)
1 (in)	0.041 (gal) x	(ft)	=	x 3	=
2 (in)	0.163 (gal) x	(ft)	=	x 3	=
4 (in)	0.653 (gal) x	(ft)	=	x 3	=

Monitoring Well Purging and Sampling Data

Purging Device: PERISTALTIC
Purging Start Time:
Purging Stop Time:
Gallons Purged:
Well Yield: High / Moderate / Low
Sampling Device:
Time of Sampling:
Second Attempt:
Third Attempt:
Fourth Attempt:
Fifth Attempt:

Well Volumes	Time	Vol. Purged (gal)	Temperature (°C)	pH (S.U.)	Conductivity (µS/cm)	Turbidity NTU	Dissolved O_2 (mg/L)
Initial	1049	-	10.78	7.07	1.13	20+	0.04
1	1053	0.5	12.79	6.95	1.72	30.4	0.00
2	1057	0.75	13.22	6.94	1.90	8.3	Overrange
3	~~1101~~	1.0	13.24	6.94	1.95	3.9	0.00
4	1105	1.25	13.22	6.94	1.98	3.6	0.00
5	SAMPLE						
6							
7							
Final							

Sample Container Information

Sample ID	Parameter	Container	Container Size	No. of Containers	Preservative
MW-03	PAH	Amber	1 L	2	None
MW-03	LEAD, Chromium	Poly	500 mL	1	HNO_3
DUP112812	LEAD	Poly	500 mL	1	HNO_3

Comments

Samples Shipped to: Green Analytical Via:
Form Completed By: AWS

The Mannik & Smith Group

Well Sampling Data Log

Well ID: MW-04

Project Information

Project #: C3210002 Date: 11/28/12
Site Name: MAIN GATE Telephone #: —
MSG Personnel Present: AWS
Regulatory Observer(s): —
Weather Conditions: Sunny Temperature °F: 40

Field Instrumentation

Static Water Level Measurement: Heron H.01L
Immiscible Layer(s) Measurement: Heron H.01L
Measurement of Field Parameters: Various
Peristaltic Pump: Masterflex E/S

Monitoring Well Data

Ground Surface Elev.:
Top of Casing Elev.:
Ground Water Elev.:
Hydraulic Location:

Additional Monitoring Well Data

Well Condition/Evidence of Tampering: None Well Diameter:
Monitoring Purpose: Phase II
Total Depth (from TOC): 23.30 (ft.) - Static Water Level: 15.75 (ft.)
= Height of Water Column: (ft.)
Immiscible Layer(s) Present: No / Yes
Top of Layer: (ft.)
Bottom of Layer: (ft.)
Thickness: (ft.)
Immiscible Layer(s) Sampled: Yes / Not Applicable

Monitor Well Diameter	Volume/foot of Water	Height of Water Column	Volume of Water Column		Minimum Vol. to Purge (gal)
1 (in)	0.041 (gal) x	(ft)	=	x 3	=
2 (in)	0.163 (gal) x	(ft)	=	x 3	=
4 (in)	0.653 (gal) x	(ft)	=	x 3	=

Monitoring Well Purging and Sampling Data

Purging Device: PERISTALTIC
Purging Start Time:
Purging Stop Time:
Gallons Purged:
Well Yield: High / Moderate / Low
Sampling Device:
Time of Sampling:
Second Attempt:
Third Attempt:
Fourth Attempt:
Fifth Attempt:

Well Volumes	Time	Vol. Purged (gal)	Temperature (°C)	pH (S.U.)	Conductivity (µS/cm)	Turbidity NTU	Dissolved O_2 (mg/L)
Initial	1150	-	13.61	6.86	1.02	90.0	2.52
1	1154	0.25	13.82	6.77	1.01	24.3	2.63
2	1158	0.50	14.18	6.74	1.01	3.6	2.80
3	1202	0.75	14.39	6.71	1.00	2.0	2.89
4	1206	1.0	14.44	6.73	1.00	1.5	3.00
5							
6							
7							
Final							

Sample Container Information

Sample ID	Parameter	Container	Container Size	No. of Containers	Preservative
MW-04	PAH	Amber	1L	2	None
FB112812	PAH	Amber	1L	2	None
EB112812	VOC	VOA	40mL	3	HCl

Comments

Equip Blank [redacted] = Bailer

Samples Shipped to: GEO Analytical
Via:
Form Completed By: AWS

The Mannik & Smith Group

Well Sampling Data Log

Well ID: MW-05

Project Information

Project #: C3210002 Date: 11/28/12
Site Name: MAINGATE Telephone #:
MSG Personnel Present: AWS
Regulatory Observer(s): —
Weather Conditions: Sunny Temperature °F: 40

Field Instrumentation

Static Water Level Measurement: Heron H.01L
Immiscible Layer(s) Measurement: Heron H.01L
Measurement of Field Parameters: Various
Peristaltic Pump: Masterflex E/S

Monitoring Well Data

Ground Surface Elev.:
Top of Casing Elev.:
Ground Water Elev.:
Hydraulic Location:

Additional Monitoring Well Data

Well Condition/Evidence of Tampering: None Well Diameter: 1"
Monitoring Purpose: PHASE II
Total Depth (from TOC): 24.67 (ft.) - Static Water Level: 14.73 (ft.)
= Height of Water Column: (ft.)
Immiscible Layer(s) Present: (No) / Yes
Top of Layer: (ft.)
Bottom of Layer: (ft.)
Thickness: (ft.)
Immiscible Layer(s) Sampled: Yes / Not Applicable

Monitor Well Diameter	Volume/foot of Water	Height of Water Column	Volume of Water Column		Minimum Vol. to Purge (gal)
1 (in)	0.041 (gal) x	(ft)	=	x 3	=
2 (in)	0.163 (gal) x	(ft)	=	x 3	=
4 (in)	0.653 (gal) x	(ft)	=	x 3	=

Monitoring Well Purging and Sampling Data

Purging Device: PERISTALTIC
Purging Start Time:
Purging Stop Time:
Gallons Purged:
Well Yield: High / Moderate / Low
Sampling Device:
Time of Sampling:
Second Attempt:
Third Attempt:
Fourth Attempt:
Fifth Attempt:

Well Volumes	Time	Vol. Purged (gal)	Temperature (°C)	pH (S.U.)	Conductivity (µS/cm)	Turbidity NTU	Dissolved O_2 (mg/L)
Initial	1234	—	12.45	7.01	3.34	115	0.00
1	1238	0.5	12.48	7.03	3.29	32.5	0.00
2	1242	0.75	12.59	7.02	3.19	24.4	0.00
3	1246	1.0	12.57	7.02	3.11	14.1	0.00
4	1250	1.25	12.60	7.02	5.03	9.8	0.00
5							
6							
7							
Final							

Sample Container Information

Sample ID	Parameter	Container	Container Size	No. of Containers	Preservative
MW-05	PAH	Amber	1L	2	None

Comments

Samples Shipped to: GeoAnalytical Via:
Form Completed By: AWS

Mannik & Smith Group

Well Sampling Data Log

Well ID: MW-06

Project Information

Project #: C3210002 Date: 11/28/12
Site Name: MAINGATE Telephone #:
MSG Personnel Present: AWS
Regulatory Observer(s): —
Weather Conditions: OVERCAST Temperature °F: 35°

Field Instrumentation

Static Water Level Measurement: Heron H.01L
Immiscible Layer(s) Measurement: Heron H.01L
Measurement of Field Parameters: Various
Peristaltic Pump: Masterflex E/S

Monitoring Well Data

Ground Surface Elev.:
Top of Casing Elev.:
Ground Water Elev.:
Hydraulic Location:

Additional Monitoring Well Data

Well Condition/Evidence of Tampering: None Well Diameter: 1"
Monitoring Purpose: Phase II
Total Depth (from TOC): 25.08 (ft.) - Static Water Level: 17.35 (ft.)
= Height of Water Column: (ft.)
Immiscible Layer(s) Present: (No) / Yes
Top of Layer: (ft.)
Bottom of Layer: (ft.)
Thickness: (ft.)
Immiscible Layer(s) Sampled: Yes / Not Applicable

Monitor Well Diameter	Volume/foot of Water	Height of Water Column	Volume of Water Column		Minimum Vol. to Purge (gal)
1 (in)	0.041 (gal) x	(ft)	=	x 3	=
2 (in)	0.163 (gal) x	(ft)	=	x 3	=
4 (in)	0.653 (gal) x	(ft)	=	x 3	=

Monitoring Well Purging and Sampling Data

Purging Device: PERISTALTIC
Purging Start Time:
Purging Stop Time:
Gallons Purged:
Well Yield: High / Moderate / Low
Sampling Device:
Time of Sampling:
Second Attempt:
Third Attempt:
Fourth Attempt:
Fifth Attempt:

Well Volumes	Time	Vol. Purged (gal)	Temperature (°C)	pH (S.U.)	Conductivity (µS/cm)	Turbidity NTU	Dissolved O_2 (mg/L)
Initial	1327	—	13.22	7.23	2.44	78.6	0.85
1	1331	0.75	13.35	7.22	2.44	42.7	0.96
2	1335	1.0	12.68	7.23	2.48	29.2	0.91
3	1339	1.25	12.64	7.23	2.47	16.3	0.93
4	1343	1.5	12.76	7.22	2.44	12.4	0.91
5							
6							
7							
Final							

Sample Container Information

Sample ID	Parameter	Container	Container Size	No. of Containers	Preservative
MW-06	VOCs	VOA	40 mL	3	HCl
MW-06	PAHs	Amber Plastic	1 L	2	~~HNO3~~ None
MW-06	ARSENIC	Plastic	500mL	1	HNO_3

Comments

Samples Shipped to: GeoAnalytical Via:
Form Completed By: AWS

APPENDIX E: LABORATORY REPORTS

Affidavit of VAP Certified Laboratory
(April 2011 Template)

[For VAP certified laboratories to attest to "certified data" under OAC 3745-300-13(N) and OAC 3745-300-04(A). Note that Ohio EPA is to receive a legible copy of the CL's affidavit. The entity that received the CL's analytical report under affidavit may retain the CL's affidavit original.]

State of Ohio)
) ss:
County of Summit)

I, Thomas Morsefield, being first duly sworn according to law, state that, to the best of my knowledge, information and belief:

1. I am an adult over the age of eighteen years old and competent to testify herein.

2. I am employed by GEO Analytical, Inc. ("the laboratory") as President. I am authorized to submit this affidavit on behalf of the laboratory.

3. The purpose of this submission is to support a request for a no further action letter or other aspects of a voluntary action, under Ohio's Voluntary Action Program (VAP) as set forth in Ohio Revised Code Chapter 3746 and Ohio Administrative Code (OAC) Chapter 3745-300.

4. GEO Analytical, Inc. performed analyses for The Mannik & Smith Group, Inc. for a voluntary action at property known as C3210002-Maingate

5. This affidavit applies to and is submitted with the following information, data, documents or reports for the property:

Document ID	Date of Document
1211017	12/07/2012

6. GEO Analytical, Inc. was a VAP certified laboratory pursuant to OAC 3745-300-04 when it performed the analyses referenced herein.

7. All analyses under this affidavit consist of VAP "certified data" as described in OAC 3745-300-04(A) - - unless paragraph b., below, specifies the exceptions:

   a. The laboratory performed the analyses within its current VAP certification. The laboratory was certified for each analyte, parameter group and method used at the time that it performed the analyses. The analyses were performed consistent with the laboratory's standard operating procedures and quality assurance program plan as approved under OAC 3745-300-04.

   b. Exceptions, if any: The analyses specified below (a) may not have been or were not performed consistent with laboratory's procedures as required by its Ohio EPA-approved SOP or QAPP, or (b) are not encompassed by VAP's certified lab program.

Certified Lab Affidavit Pursuant to OAC 3745-300-13(N)

Sample Number / Document ID	Analyte / Parameter Group	Method
None noted		

8 The information, data, documents and reports identified under this affidavit are true, accurate and complete.

Further affiant sayeth naught.

Signature of Affiant

Sworn to before me and subscribed in my presence this 7 day of December, 2012.

Notary Public

Judy A. Bell, Notary Public
State of Ohio
Recorded in Summit County
My Commission Expires April 25, 2017

Revised 5/09, 8/09, 4/11; consistent with OAC 3745-300-04 (10/14/06, and rev. eff. 3/1/09 versions)

Friday, December 07, 2012

John Zampino
The Mannik & Smith Group, Inc.
23225 Mercantile Rd.
Beachwood, Ohio 44122

TEL: 216-378-1490
FAX 216-378-1497

RE: C3210002-Maingate

Order No.: 1211017

Dear John Zampino:

GEO Analytical, Inc. received 10 sample(s) on 11/28/2012 for the analyses presented in the following report.

Analyses and all data for associated QC met laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Reviewed by _____

GEO Analytical, Inc.

Date: *07-Dec-12*

CLIENT: The Mannik & Smith Group, Inc.
Project: C3210002-Maingate
Lab Order: 1211017

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
1211017-001A	MW-01		11/28/2012	11/28/2012
1211017-002A	MW-02		11/28/2012	11/28/2012
1211017-003A	MW-03		11/28/2012	11/28/2012
1211017-003B	MW-03		11/28/2012	11/28/2012
1211017-004A	MW-04		11/28/2012	11/28/2012
1211017-005A	MW-05		11/28/2012	11/28/2012
1211017-006A	MW-06		11/28/2012	11/28/2012
1211017-006B	MW-06		11/28/2012	11/28/2012
1211017-006C	MW-06		11/28/2012	11/28/2012
1211017-007A	DUP112812		11/28/2012	11/28/2012
1211017-008A	FB112812		11/28/2012	11/28/2012
1211017-009A	EB112812		11/28/2012	11/28/2012
1211017-010A	TRIP BLANK		11/28/2012	11/28/2012

9263 Ravenna Rd. • Suite A-7 • Twinsburg, Ohio 44087 • Phone 330 963 6990 • Fax 330 963 6975

GEO Analytical, Inc.

Date: *07-Dec-12*

CLIENT: The Mannik & Smith Group, Inc.
Project: C3210002-Maingate
Lab Order: 1211017

CASE NARRATIVE

The laboratory control sample containing one or more of the target compounds was above the established upper control limit, but the compound was not detected in the sample. The data is reportable with no expected bias. CRC

Applies to the following sample(s): LCS-11805

9263 Ravenna Rd. • Suite A-7 • Twinsburg, Ohio 44087 • Phone 330 963 6990 • Fax 330 963 6975

GEO Analytical, Inc.

Date: *07-Dec-12*

CLIENT:	The Mannik & Smith Group, Inc.	**Client Sample ID:**	MW-01
Lab Order:	1211017	**Tag Number:**	
Project:	C3210002-Maingate	**Collection Date:**	11/28/2012
Lab ID:	1211017-001A **Date Received:** 11/28/2012	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	Date Analyzed
VOLATILE ORGANIC COMPOUNDS IN WATER		**SW8260A**		**(SW5030A)**	Analyst: cc
1,1,1,2-Tetrachloroethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,1,1-Trichloroethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,1,2,2-Tetrachloroethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,1,2-Trichloroethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,1-Dichloroethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,1-Dichloroethene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,1-Dichloropropene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,2,3-Trichlorobenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,2,3-Trichloropropane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,2,4-Trichlorobenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,2,4-Trimethylbenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,2-Dibromo-3-chloropropane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,2-Dibromoethane	ND	2.00		µg/L	11/29/2012 11:57:00 AM
1,2-Dichlorobenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,2-Dichloroethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,2-Dichloropropane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,3,5-Trimethylbenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,3-Dichlorobenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,3-Dichloropropane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
1,4-Dichlorobenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
2,2-Dichloropropane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
2-Butanone	ND	100		µg/L	11/29/2012 11:57:00 AM
2-Chlorotoluene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
2-Hexanone	ND	100		µg/L	11/29/2012 11:57:00 AM
4-Chlorotoluene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
4-Isopropyltoluene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
4-Methyl-2-pentanone	ND	100		µg/L	11/29/2012 11:57:00 AM
Acetone	ND	100		µg/L	11/29/2012 11:57:00 AM
Benzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Bromobenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Bromochloromethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Bromodichloromethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Bromoform	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Bromomethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Carbon disulfide	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Carbon tetrachloride	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Chlorobenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Chloroethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Chloroform	ND	5.00		µg/L	11/29/2012 11:57:00 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

GEO Analytical, Inc.

Date: *07-Dec-12*

CLIENT:	The Mannik & Smith Group, Inc.	**Client Sample ID:**	MW-02
Lab Order:	1211017	**Tag Number:**	
Project:	C3210002-Maingate	**Collection Date:**	11/28/2012
Lab ID:	1211017-002A **Date Received:** 11/28/2012	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	Date Analyzed
VOLATILE ORGANIC COMPOUNDS IN WATER		**SW8260A**		**(SW5030A)**	Analyst: cc
1,1,1,2-Tetrachloroethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,1,1-Trichloroethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,1,2,2-Tetrachloroethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,1,2-Trichloroethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,1-Dichloroethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,1-Dichloroethene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,1-Dichloropropene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,2,3-Trichlorobenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,2,3-Trichloropropane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,2,4-Trichlorobenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,2,4-Trimethylbenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,2-Dibromo-3-chloropropane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,2-Dibromoethane	ND	2.00		µg/L	11/29/2012 12:46:00 PM
1,2-Dichlorobenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,2-Dichloroethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,2-Dichloropropane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,3,5-Trimethylbenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,3-Dichlorobenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,3-Dichloropropane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
1,4-Dichlorobenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
2,2-Dichloropropane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
2-Butanone	ND	100		µg/L	11/29/2012 12:46:00 PM
2-Chlorotoluene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
2-Hexanone	ND	100		µg/L	11/29/2012 12:46:00 PM
4-Chlorotoluene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
4-Isopropyltoluene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
4-Methyl-2-pentanone	ND	100		µg/L	11/29/2012 12:46:00 PM
Acetone	ND	100		µg/L	11/29/2012 12:46:00 PM
Benzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Bromobenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Bromochloromethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Bromodichloromethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Bromoform	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Bromomethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Carbon disulfide	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Carbon tetrachloride	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Chlorobenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Chloroethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Chloroform	ND	5.00		µg/L	11/29/2012 12:46:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Value above quantitation range
J	Analyte detected below quantitation limits
S	Spike Recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit

GEO Analytical, Inc.

Date: *07-Dec-12*

CLIENT:	The Mannik & Smith Group, Inc.	**Client Sample ID:**	MW-01
Lab Order:	1211017	**Tag Number:**	
Project:	C3210002-Maingate	**Collection Date:**	11/28/2012
Lab ID:	1211017-001A **Date Received:** 11/28/2012	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	Date Analyzed
VOLATILE ORGANIC COMPOUNDS IN WATER		**SW8260A**		**(SW5030A)**	Analyst: cc
Chloromethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
cis-1,2-Dichloroethene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
cis-1,3-Dichloropropene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Dibromochloromethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Dibromomethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Dichlorodifluoromethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Ethylbenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Hexachlorobutadiene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Isopropylbenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
m,p-Xylene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Methyl tert-butyl ether	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Methylene chloride	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Naphthalene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
n-Butylbenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
n-Propylbenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
o-Xylene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
sec-Butylbenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Styrene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
tert-Butylbenzene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Tetrachloroethene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Toluene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
trans-1,2-Dichloroethene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
trans-1,3-Dichloropropene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Trichloroethene	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Trichlorofluoromethane	ND	5.00		µg/L	11/29/2012 11:57:00 AM
Vinyl acetate	ND	100		µg/L	11/29/2012 11:57:00 AM
Vinyl chloride	ND	2.00		µg/L	11/29/2012 11:57:00 AM
Surr: 1,2-Dichloroethane d4	96.4	85.5-109		%REC	11/29/2012 11:57:00 AM
Surr: Bromofluorobenzene	100	82.8-118		%REC	11/29/2012 11:57:00 AM
Surr: Toluene-d8	96.0	87.1-112		%REC	11/29/2012 11:57:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Value above quantitation range
J	Analyte detected below quantitation limits
S	Spike Recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit

GEO Analytical, Inc.

Date: *07-Dec-12*

CLIENT:	The Mannik & Smith Group, Inc.	**Client Sample ID:**	MW-02
Lab Order:	1211017	**Tag Number:**	
Project:	C3210002-Maingate	**Collection Date:**	11/28/2012
Lab ID:	1211017-002A **Date Received:** 11/28/2012	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	Date Analyzed
VOLATILE ORGANIC COMPOUNDS IN WATER		**SW8260A**		**(SW5030A)**	Analyst: cc
Chloromethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
cis-1,2-Dichloroethene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
cis-1,3-Dichloropropene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Dibromochloromethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Dibromomethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Dichlorodifluoromethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Ethylbenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Hexachlorobutadiene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Isopropylbenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
m,p-Xylene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Methyl tert-butyl ether	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Methylene chloride	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Naphthalene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
n-Butylbenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
n-Propylbenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
o-Xylene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
sec-Butylbenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Styrene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
tert-Butylbenzene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Tetrachloroethene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Toluene	62.2	5.00		µg/L	11/29/2012 12:46:00 PM
trans-1,2-Dichloroethene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
trans-1,3-Dichloropropene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Trichloroethene	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Trichlorofluoromethane	ND	5.00		µg/L	11/29/2012 12:46:00 PM
Vinyl acetate	ND	100		µg/L	11/29/2012 12:46:00 PM
Vinyl chloride	ND	2.00		µg/L	11/29/2012 12:46:00 PM
Surr: 1,2-Dichloroethane d4	96.6	85.5-109		%REC	11/29/2012 12:46:00 PM
Surr: Bromofluorobenzene	98.8	82.8-118		%REC	11/29/2012 12:46:00 PM
Surr: Toluene-d8	98.0	87.1-112		%REC	11/29/2012 12:46:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

GEO Analytical, Inc.

Date: *07-Dec-12*

CLIENT:	The Mannik & Smith Group, Inc.	**Client Sample ID:**	MW-03
Lab Order:	1211017	**Tag Number:**	
Project:	C3210002-Maingate	**Collection Date:**	11/28/2012
Lab ID:	1211017-003A **Date Received:** 11/28/2012	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	Date Analyzed
SEMIVOLATILE ORGANICS IN WATER		**SW8270C**		**(SW3510)**	Analyst: **TL**
Acenaphthene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Acenaphthylene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Anthracene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Benzo[a]anthracene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Benzo[a]pyrene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Benzo[b]fluoranthene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Benzo[g,h,i]perylene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Benzo[k]fluoranthene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Chrysene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Dibenz[a,h]anthracene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Fluoranthene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Fluorene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Naphthalene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Phenanthrene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Pyrene	ND	0.150		µg/L	11/29/2012 6:21:00 PM
Surr: 2-Fluorobiphenyl	49.7	32.2-113		%REC	11/29/2012 6:21:00 PM
Surr: 4-Terphenyl-d14	88.1	53.5-130		%REC	11/29/2012 6:21:00 PM
Surr: Nitrobenzene-d5	45.9	18.5-130		%REC	11/29/2012 6:21:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

GEO Analytical, Inc.

Date: *07-Dec-12*

CLIENT:	The Mannik & Smith Group, Inc.	**Client Sample ID:**	MW-03
Lab Order:	1211017	**Tag Number:**	
Project:	C3210002-Maingate	**Collection Date:**	11/28/2012
Lab ID:	1211017-003B **Date Received:** 11/28/2012	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	Date Analyzed
METALS IN WATER BY ICP		**SW6010B**		**(SW3005A)**	Analyst: **AOR**
Chromium	ND	0.00500		mg/L	12/6/2012 2:44:00 PM
Lead	ND	0.00500		mg/L	12/6/2012 2:44:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

GEO Analytical, Inc.

Date: *07-Dec-12*

CLIENT:	The Mannik & Smith Group, Inc.	**Client Sample ID:**	MW-04
Lab Order:	1211017	**Tag Number:**	
Project:	C3210002-Maingate	**Collection Date:**	11/28/2012
Lab ID:	1211017-004A **Date Received:** 11/28/2012	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	Date Analyzed
SEMIVOLATILE ORGANICS IN WATER		**SW8270C**		**(SW3510)**	Analyst: TL
Acenaphthene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Acenaphthylene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Anthracene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Benzo[a]anthracene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Benzo[a]pyrene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Benzo[b]fluoranthene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Benzo[g,h,i]perylene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Benzo[k]fluoranthene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Chrysene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Dibenz[a,h]anthracene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Fluoranthene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Fluorene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Naphthalene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Phenanthrene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Pyrene	ND	0.150		µg/L	11/29/2012 7:06:00 PM
Surr: 2-Fluorobiphenyl	43.8	32.2-113		%REC	11/29/2012 7:06:00 PM
Surr: 4-Terphenyl-d14	85.4	53.5-130		%REC	11/29/2012 7:06:00 PM
Surr: Nitrobenzene-d5	42.6	18.5-130		%REC	11/29/2012 7:06:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

GEO Analytical, Inc.

Date: *07-Dec-12*

CLIENT:	The Mannik & Smith Group, Inc.	**Client Sample ID:**	MW-05
Lab Order:	1211017	**Tag Number:**	
Project:	C3210002-Maingate	**Collection Date:**	11/28/2012
Lab ID:	1211017-005A **Date Received:** 11/28/2012	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	Date Analyzed
SEMIVOLATILE ORGANICS IN WATER		**SW8270C**		**(SW3510)**	Analyst: TL
Acenaphthene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Acenaphthylene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Anthracene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Benzo[a]anthracene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Benzo[a]pyrene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Benzo[b]fluoranthene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Benzo[g,h,i]perylene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Benzo[k]fluoranthene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Chrysene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Dibenz[a,h]anthracene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Fluoranthene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Fluorene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Naphthalene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Phenanthrene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Pyrene	ND	0.150		µg/L	11/29/2012 7:51:00 PM
Surr: 2-Fluorobiphenyl	54.0	32.2-113		%REC	11/29/2012 7:51:00 PM
Surr: 4-Terphenyl-d14	92.0	53.5-130		%REC	11/29/2012 7:51:00 PM
Surr: Nitrobenzene-d5	49.0	18.5-130		%REC	11/29/2012 7:51:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

GEO Analytical, Inc.

Date: *07-Dec-12*

CLIENT:	The Mannik & Smith Group, Inc.	**Client Sample ID:**	MW-06
Lab Order:	1211017	**Tag Number:**	
Project:	C3210002-Maingate	**Collection Date:**	11/28/2012
Lab ID:	1211017-006A **Date Received:** 11/28/2012	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	Date Analyzed
VOLATILE ORGANIC COMPOUNDS IN WATER		**SW8260A**		**(SW5030A)**	Analyst: cc
1,1,1,2-Tetrachloroethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,1,1-Trichloroethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,1,2,2-Tetrachloroethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,1,2-Trichloroethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,1-Dichloroethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,1-Dichloroethene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,1-Dichloropropene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,2,3-Trichlorobenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,2,3-Trichloropropane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,2,4-Trichlorobenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,2,4-Trimethylbenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,2-Dibromo-3-chloropropane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,2-Dibromoethane	ND	2.00		µg/L	11/29/2012 1:32:00 PM
1,2-Dichlorobenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,2-Dichloroethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,2-Dichloropropane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,3,5-Trimethylbenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,3-Dichlorobenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,3-Dichloropropane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
1,4-Dichlorobenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
2,2-Dichloropropane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
2-Butanone	ND	100		µg/L	11/29/2012 1:32:00 PM
2-Chlorotoluene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
2-Hexanone	ND	100		µg/L	11/29/2012 1:32:00 PM
4-Chlorotoluene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
4-Isopropyltoluene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
4-Methyl-2-pentanone	ND	100		µg/L	11/29/2012 1:32:00 PM
Acetone	ND	100		µg/L	11/29/2012 1:32:00 PM
Benzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Bromobenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Bromochloromethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Bromodichloromethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Bromoform	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Bromomethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Carbon disulfide	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Carbon tetrachloride	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Chlorobenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Chloroethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Chloroform	ND	5.00		µg/L	11/29/2012 1:32:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

GEO Analytical, Inc.

Date: *07-Dec-12*

CLIENT:	The Mannik & Smith Group, Inc.	**Client Sample ID:**	MW-06
Lab Order:	1211017	**Tag Number:**	
Project:	C3210002-Maingate	**Collection Date:**	11/28/2012
Lab ID:	1211017-006A **Date Received:** 11/28/2012	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	Date Analyzed
VOLATILE ORGANIC COMPOUNDS IN WATER		**SW8260A**		**(SW5030A)**	Analyst: cc
Chloromethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
cis-1,2-Dichloroethene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
cis-1,3-Dichloropropene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Dibromochloromethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Dibromomethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Dichlorodifluoromethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Ethylbenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Hexachlorobutadiene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Isopropylbenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
m,p-Xylene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Methyl tert-butyl ether	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Methylene chloride	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Naphthalene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
n-Butylbenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
n-Propylbenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
o-Xylene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
sec-Butylbenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Styrene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
tert-Butylbenzene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Tetrachloroethene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Toluene	73.4	5.00		µg/L	11/29/2012 1:32:00 PM
trans-1,2-Dichloroethene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
trans-1,3-Dichloropropene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Trichloroethene	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Trichlorofluoromethane	ND	5.00		µg/L	11/29/2012 1:32:00 PM
Vinyl acetate	ND	100		µg/L	11/29/2012 1:32:00 PM
Vinyl chloride	ND	2.00		µg/L	11/29/2012 1:32:00 PM
Surr: 1,2-Dichloroethane d4	96.7	85.5-109		%REC	11/29/2012 1:32:00 PM
Surr: Bromofluorobenzene	100	82.8-118		%REC	11/29/2012 1:32:00 PM
Surr: Toluene-d8	97.1	87.1-112		%REC	11/29/2012 1:32:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		